

New system, compile warnings ...

[knemunai](#) 50 posts since

Apr 16, 2008 Oklahoma got a new supercomputer. It's very similar to the last system (x86_64 Linux) but the Portland Group compiler (7.0.7) is even pickier than the last. Here are some of the warnings I got with 'make pgi' in src/lib/read_grib with LIS version 5 revision 1468:

```
pgcc -O2 -DLINUX -c cio.c
PGC-W-0156-Type not specified, 'int' assumed (cio.c: 61)
PGC-W-0156-Type not specified, 'int' assumed (cio.c: 126)
PGC-W-0156-Type not specified, 'int' assumed (cio.c: 161)
PGC-W-0156-Type not specified, 'int' assumed (cio.c: 196)
PGC-W-0156-Type not specified, 'int' assumed (cio.c: 238)
PGC/x86-64 Linux 7.0-7: compilation completed with warnings
```

Can I ignore these?

Wow, it's really picky. In /src/make/MAKDEP

```
PGC-W-0156-Type not specified, 'int' assumed (main.c: 75)
PGC/x86-64 Linux 7.0-7: compilation completed with warnings
```

Could these warnings have anything to do with this happening with the Stage 4 test case? The file is there and the permissions are fine

```
$ more lisout11200.txt
```

```
/home/jmonroe/LIS5r1468pgi
```

```
Sun Sep 7 13:18:10 CDT 2008
```

```
Copen: Attempting to open file = ./input/FORCING/STIV/200210/ST4.2002102902.01h
```

```
Fortran Unit = 10
```

```
UNIX File descriptor: 3
```

```
GRIB Edition: 71
```

```
Sun Sep 7 13:18:13 CDT 2008
```

```
$ tail lisdiag.0000
```

```
MSG: getgdas -- changing grid to 2000 -- 2002
```

```
Reading the GDAS elevation ./input/UMD-25KM/gdas_T170_elev.1gd4r
```

```
Getting new time1 data
```

```
Reading GDAS file1
```

```
./input/FORCING/GDAS//200210/2002102900.gdas1.sfluxgrbf00.sg
```

```
Getting new time2 data
```

New system, compile warnings ...

Reading GDAS file2

./input/FORCING/GDAS//200210/2002102900.gdas1.sfluxgrbf03.sg

Getting new STAGE4 precip data::

./input/FORCING/STIV/200210/ST4.2002102902.01h

I decided to try to compile with the Intel compiler and got a warning in src/lib/read_grib with it also.

icc -O2 -DIFC -DLINUX -c cio.c

cio.c(142): warning #181: argument is incompatible with corresponding format string conversion

printf(" lseek return=%d, *mode=%d\n", i, *mode);

^ Tags: compile, lis

[knemunai](#) 50 posts since

Apr 16, 2008 1. Re: New system, compile warnings Sep 15, 2008 9:09 AM

Here are some more Intel errors:

```
fortcom: Error:
dataassim_pluginMod.F90, line 112: Error in opening the
compiled module file. Check INCLUDE paths.  [GMAOENKF_MODULE]
    use gmaoenkf_module,                only : gmaoenkf_init, &
-----^
fortcom: Error: dataassim_pluginMod.F90, line 130: Conflicting
attributes
or multiple declaration of name.  [GMAOENKF_INIT]
    call registerdainit(gmaoenkfId,gmaoenkf_init)
-----^
fortcom: Error: dataassim_pluginMod.F90, line 131: Conflicting
attributes
or multiple declaration of name.  [GMAOENKF_INCREMENTS]
    call registercomputeincrements(gmaoenkfId,gmaoenkf_increments)
-----^
fortcom: Error: dataassim_pluginMod.F90, line 132: Conflicting
attributes
or multiple declaration of name.  [GMAOENKF_UPDATE]
    call registerapplyincrements(gmaoenkfId,gmaoenkf_update)
-----^
fortcom: Error: dataassim_pluginMod.F90, line 133: Conflicting
attributes
or multiple declaration of name.  [GMAOENKF_DIAGNOSTICS]
    call registerdaoutput(gmaoenkfId,gmaoenkf_diagnostics)
-----^
fortcom: Error: dataassim_pluginMod.F90, line 134: Conflicting
attributes
or multiple declaration of name.  [GMAOENKF_FINAL]
    call registerdafinalize(gmaoenkfId,gmaoenkf_final)
-----^
fortcom: Error: dataassim_pluginMod.F90, line 112: Name in
only-list does
```

New system, compile warnings ...

```
not exist.    [GMAOENKF_INIT]
      use gmaoenkf_module,          only : gmaoenkf_init, &
      -----^
fortcom: Error: dataassim_pluginMod.F90, line 113: Name in
only-list does
not exist.    [GMAOENKF_INCREMENTS]
      gmaoenkf_increments, gmaoenkf_update, &
      -----^
fortcom: Error: dataassim_pluginMod.F90, line 113: Name in
only-list does
not exist.    [GMAOENKF_UPDATE]
      gmaoenkf_increments, gmaoenkf_update, &
      -----^
fortcom: Error: dataassim_pluginMod.F90, line 114: Name in
only-list does
not exist.    [GMAOENKF_FINAL]
      gmaoenkf_final,gmaoenkf_diagnostics
      -----^
fortcom: Error: dataassim_pluginMod.F90, line 114: Name in
only-list does
not exist.    [GMAOENKF_DIAGNOSTICS]
      gmaoenkf_final,gmaoenkf_diagnostics
      -----^
compilation aborted

for
../plugins/dataassim_pluginMod.F90 (code 1)
```

[knemunai](#) 50 posts since

Apr 16, 2008 **2. Re: New system, compile warnings** Sep 13, 2008 7:40 PM

in response to: [knemunai](#) And this warning I've never seen before

gmake: Warning: File `MoninObukIni.o' has modification time 0.21 s in the future

[sujay](#) 118 posts since

Sep 20, 2007 **3. Re: New system, compile warnings** Sep 15, 2008 2:49 PM

in response to: [knemunai](#) Kodi,

There are several issues that you are reporting here. First make sure that you are able to build a LIS executable before trying to run (stageiv errors). Most of the warnings you post can be ignored. The error related to the dataassim_pluginMod.o is due to the fact that the compiler is not able to find certain files. Please make sure that you have the following directory line in your src/make/Filepath file - ../dataassim/algorithm/gmaoenkf

-S

[knemunai](#) 50 posts since

Apr 16, 2008 **4. Re: New system, compile warnings** Sep 16, 2008 9:40 AM

in response to: [sujay](#) Sujay,

New system, compile warnings ...

Hmm, odd. I randomly decided to recompile (gmake in src/make) the intel version while sitting in a workshop and the only warnings are the dummy argument/intent warnings and there are no errors. According to a previous email exchange those are ok to ignore. Is this still correct? If so, I will go ahead and run the test cases with Intel. I've run them with PGI assuming those warnings are negligible but haven't checked the output yet because the system was offline quite a bit last week. Thanks.

-Kodi

[knemunai](#) 50 posts since

Apr 16, 2008 **5. Re: New system, compile warnings** Sep 18, 2008 4:41 PM

in response to: [knemunai](#) I went through the test cases with my PGI-compiled version. Are there differences between the NLDAS forcing on the ftp server and the NLDAS forcing used in the test case? Because of the new system, I had to move all of my forcing data. When I noticed that the NLDAS forcing test case files had the same names as the forcing data I had just transferred, I ran the test case with the NLDAS forcing data from the ftp server that I downloaded for spin-up (tar files have Sept 2006 dates). All of the variables in the test case output files matched up except swdown for one of the times. Below is the difference in swdown between the output file downloaded from the LIS website and the test case run on our system. Any idea why they are different?

-Kodi **Attachments:**

- [swdown.gif](#) (63.7 K)

[knemunai](#) 50 posts since

Apr 16, 2008 **6. Re: New system, compile warnings** Sep 23, 2008 10:42 AM

in response to: [knemunai](#) I ran the test cases with the Intel-compiled version. The GDAS, NLDAS, and Lambert cases ran fine and the output looks good. However, the Noah and Nesting test cases, both of which use Noah, are stalling at the end of runs. For example, the end of lisdiag for the Noah test case looks like this:

LIS cycle starting for: 10/29/2002 21:00:00

Getting new time2 data

Reading GDAS file2

./input/FORCING/GDAS//200210/2002103000.gdas1.sfluxgrbf00.sg

LIS cycle starting for: 10/29/2002 21:30:00

LIS cycle starting for: 10/29/2002 22:00:00

LIS cycle starting for: 10/29/2002 22:30:00

LIS cycle starting for: 10/29/2002 23:00:00

LIS cycle starting for: 10/29/2002 23:30:00

Then it just sits there until the wall clock runs out. So, I will go over the Intel warnings again to see if there are any related to Noah and if not, then I will move on with PGI and compile with MPICH.

*None of the warnings were specific to Noah.